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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/532,380

04/21/2005

Claus Bischoff

10191/3897

1743

26646 7590 07/24/2007  
KENYON & KENYON LLP  
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EXAMINER

VANAMAN, FRANK BENNETT

ART UNIT

PAPER NUMBER

3618

MAIL DATE

DELIVERY MODE

07/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/532,380

Applicant(s)

BISCHOFF ET AL.

Examiner

Frank Vanaman

Art Unit

3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/7/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **Status of Application**

1. Applicant's amendment, filed May 7, 2007, has been entered in the application. Claims 12-22 are pending.

### **Claim Rejections - 35 USC § 102**

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 12, 13, 18, 19, 21 and 22, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Hara et al. (US 5,713,814). Hara teaches a control system for a motor vehicle having a hybrid configuration including an engine (1) and motor/generator (5) as well as a transmission (4) for driving vehicle wheels (19), including a controller (10) which controls the operation of the vehicle including the engine, battery (7), motor/generator, and transmission, and monitors an engine speed (11), vehicle speed (14), motor generator speed (15) and battery state of charge (17), wherein battery state of charge, understood to be inversely proportional to the power required by the battery is employed to select amongst a plurality of characteristic maps (e.g., figures 14, 15, 16), each of which relate kinematic and dynamic degrees of freedom to operational configuration of the vehicle including at least a speed and a throttle position for determining a set-point.

### **Claim Rejections - 35 USC § 103**

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claim 20, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. (cited above). The reference to Hara et al. is discussed above and while teaching a setpoint throttle position, fails to explicitly teach a setpoint torque. It is very well known in the vehicle arts that a desired torque is set by either a throttle position or a braking control position, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a setpoint torque in the engine/motor control map in order to tailor the operation of the vehicle to

accommodate braking conditions (i.e., when a throttle opening would expectedly be at zero) as well as speed increase and/or maintenance conditions.

6. Claims 14-17, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. in view of Yoshino et al. (EP 1,142,749, cited by applicant). The reference to Hara et al. is discussed above and fails to teach the use of the electrical power required by consumers on the vehicle as governing the choice of characteristic map. The examiner notes that indirectly, any consumer requiring power from the battery will affect the battery state of charge, and as it is very common for a vehicle to have at least one on-board consumer (e.g., radio, light, wiper motor, etc.) it is initially well known that the use of a consumer will have an effect on the battery condition. Further Yoshino teaches that it is well known to additionally take into consideration the on-board loads (paragraph 0052, value tTg) in determining an overall power requirement in the management of an electrical system of a hybrid vehicle. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to explicitly take into consideration the value of on-board power loads for the vehicle in determining an operational mode for the purpose of anticipating load conditions prior to a measurable change in battery state of charge, thus promoting a more responsive control system.

#### **Response to Comments**

7. Applicant's comments, filed with the amendment, have been carefully considered. Applicant has asserted that the reference to Hara et al. fails to teach all limitations of claim 12. The examiner disagrees. Hara et al. teach a plurality of characteristic operation maps (figures 14, 15, 16). The maps are based on at least two degrees of freedom associated with dynamic and/or kinematic vehicle characteristics (speed and throttle position). They are selected based on battery state of charge which is inversely proportional to the power required by the battery to achieve a full charge state. Operating points are selected as a function of the characteristic maps, insofar, *at least*, as the regions of operation of the various devices are varied by the maps. Firstly

compare phantom vs. solid boundaries in each map; secondly note that each map locates the boundaries differently. Note Hara et al. at col. 13, lines 16-22, which identifies a relationship between the maps and the operational steps. Applicant's comments directed to col. 7 in Hara et al. are noted, however this is not a complete characterization of the operation of the reference, as applicant is undoubtedly well aware.

Many of the difficulties encountered in the prosecution of patent applications may be alleviated if each applicant includes, at the soonest possible time, claims varying from the broadest to which he or she believes he or she is entitled to the most detailed that he or she is willing to accept.

### **Conclusion**

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(cont'd., over)

Art Unit: 3618

A response to this action should be mailed to:

Mail Stop \_\_\_\_\_

Commissioner for Patents


P. O. Box 1450

Alexandria, VA 22313-1450,

Or faxed to:

PTO Central Fax: 571-273-8300

**F. VANAMAN**  
**Primary Examiner**  
**Art Unit 3618**



7/19/07